#16

1646

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RAW SEQUENCE LISTING DATE: 05/13/2002
PATENT APPLICATION: US/09/507,968D TIME: 15:10:49

Input Set : A:\09507968 Substitute SEQ LIST Jan 2002.txt
Output Set: N:\CRF3\05132002\I507968D.raw


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 3 <110> APPLICANT: Yu et al.
 5 <120> TITLE OF INVENTION: Antibodies to Neutrokine-alpha
 7 <130> FILE REFERENCE: PF343P3
 9 <140> CURRENT APPLICATION NUMBER: 09/507,968D
10 <141> CURRENT FILING DATE: 2000-02-22
12 <150> PRIOR APPLICATION NUMBER: 60/122,388
13 <151> PRIOR FILING DATE: 1999-03-02
15 <150> PRIOR APPLICATION NUMBER: 60/124,097
16 <151> PRIOR FILING DATE: 1999-03-12
18 <150> PRIOR APPLICATION NUMBER: 60/126,599
19 <151> PRIOR FILING DATE: 1999-03-26
21 <150> PRIOR APPLICATION NUMBER: 60/127,598
22 <151> PRIOR FILING DATE: 1999-04-02
24 <150> PRIOR APPLICATION NUMBER: 60/130,412
25 <151> PRIOR FILING DATE: 1999-04-16
27 <150> PRIOR APPLICATION NUMBER: 60/130,696
28 <151> PRIOR FILING DATE: 1999-04-23
30 <150> PRIOR APPLICATION NUMBER: 60/131,278
31 <151> PRIOR FILING DATE: 1999-04-27
33 <150> PRIOR APPLICATION NUMBER: 60/131,673
34 <151> PRIOR FILING DATE: 1999-04-29
36 <150> PRIOR APPLICATION NUMBER: 60/136,784
37 <151> PRIOR FILING DATE: 1999-05-28
39 <150> PRIOR APPLICATION NUMBER: 60/142,659
40 <151> PRIOR FILING DATE: 1999-07-06
42 <150> PRIOR APPLICATION NUMBER: 60/145,824
43 <151> PRIOR FILING DATE: 1999-07-27
45 <150> PRIOR APPLICATION NUMBER: 60/167,239
46 <151> PRIOR FILING DATE: 1999-11-24
48 <150> PRIOR APPLICATION NUMBER: 60/168,624
49 <151> PRIOR FILING DATE: 1999-12-03
51 <150> PRIOR APPLICATION NUMBER: 60/171,108
52 <151> PRIOR FILING DATE: 1999-12-16
54 <150> PRIOR APPLICATION NUMBER: 60/171,626
55 <151> PRIOR FILING DATE: 1999-12-23
57 <150> PRIOR APPLICATION NUMBER: 60/176,015
58 <151> PRIOR FILING DATE: 2000-01-14
60 <150> PRIOR APPLICATION NUMBER: 09/255,794
61 <151> PRIOR FILING DATE: 1999-02-23
63 <150> PRIOR APPLICATION NUMBER: 09/005,874
64 <151> PRIOR FILING DATE: 1998-01-12
66 <150> PRIOR APPLICATION NUMBER: 60/036,100
67 <151> PRIOR FILING DATE: 1997-01-14
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PATENT APPLICATION: **US/09/507,968D** TIME: 15:10:49

Input Set : **A:\09507968 Substitute SEQ LIST Jan 2002.txt**
Output Set: **N:\CRF3\05132002\I507968D.raw**

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69 <150> PRIOR APPLICATION NUMBER: PCT/US96/17957
70 <151> PRIOR FILING DATE: 1996-10-25
72 <160> NUMBER OF SEQ ID NOS: 42
74 <170> SOFTWARE: PatentIn Ver. 2.1
76 <210> SEQ ID NO: 1
77 <211> LENGTH: 1100
78 <212> TYPE: DNA
79 <213> ORGANISM: Homo sapiens
81 <220> FEATURE:
82 <221> NAME/KEY: CDS
83 <222> LOCATION: (147)..(1001)
84 <223> OTHER INFORMATION:
86 <400> SEQUENCE: 1
87 aaattcagga taactctcct gaggggtgag ccaagccctg ccatgtagtg cacgcaggac     60
89 atcaacaaac acagataaca ggaaatgatc cattccctgt ggtcacttat tctaaaggcc    120
91 ccaaccttca aagttcaagt agtgat atg gat gac tcc aca gaa agg gag cag     173
92                               Met Asp Asp Ser Thr Glu Arg Glu Gln
93                               1               5
95 tca cgc ctt act tct tgc ctt aag aaa aga gaa gaa atg aaa ctg aag      221
96 Ser Arg Leu Thr Ser Cys Leu Lys Lys Arg Glu Glu Met Lys Leu Lys
97 10                  15                  20                  25
99 gag tgt gtt tcc atc ctc cca cgg aag gaa agc ccc tct gtc cga tcc      269
100 Glu Cys Val Ser Ile Leu Pro Arg Lys Glu Ser Pro Ser Val Arg Ser
101                 30                  35                  40
103 tcc aaa gac gga aag ctg ctg gct gca acc ttg ctg ctg gca ctg ctg      317
104 Ser Lys Asp Gly Lys Leu Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu
105             45                  50                  55
107 tct tgc tgc ctc acg gtg gtg tct ttc tac cag gtg gcc gcc ctg caa      365
108 Ser Cys Cys Leu Thr Val Val Ser Phe Tyr Gln Val Ala Ala Leu Gln
109         60                  65                  70
111 ggg gac ctg gcc agc ctc cgg gca gag ctg cag ggc cac cac gcg gag      413
112 Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Gly His His Ala Glu
113     75                  80                  85
115 aag ctg cca gca gga gca gga gcc ccc aag gcc ggc ctg gag gaa gct      461
116 Lys Leu Pro Ala Gly Ala Gly Ala Pro Lys Ala Gly Leu Glu Glu Ala
117 90                  95                  100                 105
119 cca gct gtc acc gcg gga ctg aaa atc ttt gaa cca cca gct cca gga      509
120 Pro Ala Val Thr Ala Gly Leu Lys Ile Phe Glu Pro Pro Ala Pro Gly
121                 110                 115                 120
123 gaa ggc aac tcc agt cag aac agc aga aat aag cgt gcc gtt cag ggt      557
124 Glu Gly Asn Ser Ser Gln Asn Ser Arg Asn Lys Arg Ala Val Gln Gly
125             125                 130                 135
127 cca gaa gaa aca gtc act caa gac tgc ttg caa ctg att gca gac agt      605
128 Pro Glu Glu Thr Val Thr Gln Asp Cys Leu Gln Leu Ile Ala Asp Ser
129         140                 145                 150
131 gaa aca cca act ata caa aaa gga tct tac aca ttt gtt cca tgg ctt      653
132 Glu Thr Pro Thr Ile Gln Lys Gly Ser Tyr Thr Phe Val Pro Trp Leu
133     155                 160                 165
135 ctc agc ttt aaa agg gga agt gcc cta gaa gaa aaa gag aat aaa ata      701
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RAW SEQUENCE LISTING DATE: 05/13/2002
PATENT APPLICATION: US/09/507,968D TIME: 15:10:49

Input Set : A:\09507968 Substitute SEQ LIST Jan 2002.txt
Output Set: N:\CRF3\05132002\I507968D.raw

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136 Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu Lys Glu Asn Lys Ile
137 170                 175                 180                 185
139 ttg gtc aaa gaa act ggt tac ttt ttt ata tat ggt cag gtt tta tat      749
140 Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile Tyr Gly Gln Val Leu Tyr
141                 190                 195                 200
143 act gat aag acc tac gcc atg gga cat cta att cag agg aag aag gtc      797
144 Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val
145             205                 210                 215
147 cat gtc ttt ggg gat gaa ttg agt ctg gtg act ttg ttt cga tgt att      845
148 His Val Phe Gly Asp Glu Leu Ser Leu Val Thr Leu Phe Arg Cys Ile
149         220                 225                 230
151 caa aat atg cct gaa aca cta ccc aat aat tcc tgc tat tca gct ggc      893
152 Gln Asn Met Pro Glu Thr Leu Pro Asn Asn Ser Cys Tyr Ser Ala Gly
153     235                 240                 245
155 att gca aaa ctg gaa gaa gga gat gaa ctc caa ctt gca ata cca aga      941
156 Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu Gln Leu Ala Ile Pro Arg
157 250                 255                 260                 265
159 gaa aat gca caa ata tca ctg gat gga gat gtc aca ttt ttt ggt gca      989
160 Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp Val Thr Phe Phe Gly Ala
161                 270                 275                 280
163 ttg aaa ctg ctg tgacctactt acaccatgtc tgtagctatt ttcctccctt         1041
164 Leu Lys Leu Leu
165             285
167 tctctgtacc tctaagaaga aagaatctaa ctgaaaatac caaaaaaaaa aaaaaaaaa    1100
170 <210> SEQ ID NO: 2
171 <211> LENGTH: 285
172 <212> TYPE: PRT
173 <213> ORGANISM: human
175 <400> SEQUENCE: 2
177 Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
178 1               5                   10                  15
180 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
181             20                  25                  30
183 Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
184         35                  40                  45
186 Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
187     50                  55                  60
189 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
190 65                  70                  75                  80
192 Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
193                 85                  90                  95
195 Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
196             100                 105                 110
198 Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
199         115                 120                 125
201 Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
202     130                 135                 140
204 Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
205 145                 150                 155                 160
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RAW SEQUENCE LISTING DATE: 05/13/2002
PATENT APPLICATION: US/09/507,968D TIME: 15:10:49

Input Set : A:\09507968 Substitute SEQ LIST Jan 2002.txt
Output Set: N:\CRF3\05132002\I507968D.raw

```
207 Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
208                 165                 170                 175
210 Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
211             180                 185                 190
213 Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
214         195                 200                 205
216 Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
217     210                 215                 220
219 Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
220 225                 230                 235                 240
222 Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
223                 245                 250                 255
225 Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
226             260                 265                 270
228 Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
229         275                 280                 285
231 <210> SEQ ID NO: 3
232 <211> LENGTH: 233
233 <212> TYPE: PRT
234 <213> ORGANISM: Homo sapiens
236 <400> SEQUENCE: 3
237 Met Ser Thr Glu Ser Met Ile Arg Asp Val Glu Leu Ala Glu Glu Ala
238   1               5                  10                  15
240 Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg Arg Cys Leu Phe
241              20                  25                  30
243 Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe
244          35                  40                  45
246 Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro
247      50                  55                  60
249 Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser
250  65                  70                  75                  80
252 Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro
253                  85                  90                  95
255 Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu
256             100                 105                 110
258 Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser
259         115                 120                 125
261 Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly
262     130                 135                 140
264 Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala
265 145                 150                 155                 160
267 Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro
268                 165                 170                 175
270 Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu
271             180                 185                 190
273 Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu
274         195                 200                 205
276 Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly
277     210                 215                 220
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RAW SEQUENCE LISTING DATE: 05/13/2002
PATENT APPLICATION: US/09/507,968D TIME: 15:10:49

Input Set : A:\09507968 Substitute SEQ LIST Jan 2002.txt
Output Set: N:\CRF3\05132002\I507968D.raw

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279 Gln Val Tyr Phe Gly Ile Ile Ala Leu
280 225                 230
283 <210> SEQ ID NO: 4
284 <211> LENGTH: 205
285 <212> TYPE: PRT
286 <213> ORGANISM: Homo sapiens
288 <400> SEQUENCE: 4
289 Met Thr Pro Pro Glu Arg Leu Phe Leu Pro Arg Val Arg Gly Thr Thr
290   1               5                  10                  15
292 Leu His Leu Leu Leu Leu Gly Leu Leu Leu Val Leu Leu Pro Gly Ala
293              20                  25                  30
295 Gln Gly Leu Pro Gly Val Gly Leu Thr Pro Ser Ala Ala Gln Thr Ala
296          35                  40                  45
298 Arg Gln His Pro Lys Met His Leu Ala His Ser Thr Leu Lys Pro Ala
299      50                  55                  60
301 Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn Ser Leu Leu Trp Arg
302  65                  70                  75                  80
304 Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly Phe Ser Leu Ser Asn
305                  85                  90                  95
307 Asn Ser Leu Leu Val Pro Thr Ser Gly Ile Tyr Phe Val Tyr Ser Gln
308             100                 105                 110
310 Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala Thr Ser Ser Pro
311         115                 120                 125
313 Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser Gln Tyr Pro Phe
314     130                 135                 140
316 His Val Pro Leu Leu Ser Ser Gln Lys Met Val Tyr Pro Gly Leu Gln
317 145                 150                 155                 160
319 Glu Pro Trp Leu His Ser Met Tyr His Gly Ala Ala Phe Gln Leu Thr
320                 165                 170                 175
322 Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly Ile Pro His Leu Val
323             180                 185                 190
325 Leu Ser Pro Ser Thr Val Phe Phe Gly Ala Phe Ala Leu
326         195                 200                 205
329 <210> SEQ ID NO: 5
330 <211> LENGTH: 244
331 <212> TYPE: PRT
332 <213> ORGANISM: Homo sapiens
334 <400> SEQUENCE: 5
335 Met Gly Ala Leu Gly Leu Glu Gly Arg Gly Gly Arg Leu Gln Gly Arg
336   1               5                  10                  15
338 Gly Ser Leu Leu Leu Ala Val Ala Gly Ala Thr Ser Leu Val Thr Leu
339              20                  25                  30
341 Leu Leu Ala Val Pro Ile Thr Val Leu Ala Val Leu Ala Leu Val Pro
342          35                  40                  45
344 Gln Asp Gln Gly Gly Leu Val Thr Glu Thr Ala Asp Pro Gly Ala Gln
345      50                  55                  60
347 Ala Gln Gln Gly Leu Gly Phe Gln Lys Leu Pro Glu Glu Glu Pro Glu
348  65                  70                  75                  80
350 Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His Leu Ile Gly Ala Pro
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/13/2002
PATENT APPLICATION: **US/09/507,968D** TIME: 15:10:50

Input Set : **A:\09507968 Substitute SEQ LIST Jan 2002.txt**
Output Set: **N:\CRF3\05132002\I507968D.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:7; N Pos. 3,58,67,68,69,70,71,212,255,297,300,320,335
Seq#:8; N Pos. 10,13,209,315,322,325,334,343,347,351,356,409,410,416,422
Seq#:8; N Pos. 424,426,427,429,431,433,438,439,443,444,446,447,449,450,452
Seq#:8; N Pos. 453,458,461,462,466,469,471,472,474,478,479,480,481,496,498
Seq#:8; N Pos. 504
Seq#:9; N Pos. 168,213,288,325,346,406,415,419,437,442,467,473,476,481,483
Seq#:9; N Pos. 484,494
Seq#:35; N Pos. 7,12,16
Seq#:36; N Pos. 3,14,16,17

VERIFICATION SUMMARY DATE: 05/13/2002
PATENT APPLICATION: US/09/507,968D TIME: 15:10:50

Input Set : A:\09507968 Substitute SEQ LIST Jan 2002.txt
Output Set: N:\CRF3\05132002\I507968D.raw

L:504 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:505 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:60
L:507 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:180
L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:240
L:509 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:300
L:692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:695 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:180
L:697 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:300
L:698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:360
L:699 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:420
L:700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:480
L:791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:120
L:792 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:180
L:793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:240
L:794 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:300
L:795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:360
L:796 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:420
L:797 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:480
L:1450 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:1478 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0